Amendments to the Specification

Please replace the paragraph starting on page 10, line 2 of the specification with the following paragraph. Underlined material indicates added material while deleted material has been struck through. Support for this amendment is found in the application as originally filed and no new matter has been added by this amendment.

The master decoder 4 comprises a master TS input 6 for receiving the master transport stream 1, which first enters a transport stream parser, logger and distributor unit 6, in short called TS parser 6. The TS parser 6 is in its turn communicatively coupled to a program specific decoder ~~6~~ 7, abbreviated "PSI decoder" ~~6~~ 7, and a metal data directory 8 for storing preferably predetermined meta data used to create control data objects. The TS parser 6 is further coupled to a video processing device 9 and an audio processing device 10, the two latter of which are bi-directionally coupled to the meta data directory 8. The master decoder 4 is further provided with a control signal or control data input 22 for controlling the master decoder and its components and a main master TS output 26 for outputting the parts of the master TS that are not involved in the splicing possibly together with control data objects. The main master TS and the possibly attached control data objects are received by the assembler unit 25 which is further explained below. The slave decoder 5 comprises the same functional components as the master decoder 4, with a possible exception of the main slave TS output 23 for outputting the parts of the slave TS that are not involved in the splicing. In some applications and embodiments this main slave output is not present since those applications will not need the rest of the content of the slave TS and the corresponding data is simply wasted. In the case that a first program is to be spliced with a second program that ~~are~~ is

carried in the same transport stream, this transport stream is input to the master decoder as well as to the slave decoder.

Please replace the two paragraphs, the first of which starts on page 11, line 20 of the specification and the second of which ends on page 12, line 6 of the specification, with the following paragraphs. Underlined material indicates added material. Support for this amendment is found in the application as originally filed and no new matter has been added by this amendment.

The video splicer 13 is coupled to a video buffering verifier control 14 called VBV buffer control, which is a device for controlling the variability of the data rate that occurs in a program resulting from the preceding process. The VBV buffer control 14 and the audio splicer 15 are coupled to a program assembler 17 wherein selected control data objects are assembled to a result program of associated data packets of the different kinds of data, viz. video data and audio data. By means of the assembled control data objects, an output stream of data packets is then assembled and output to a program queue 18 for buffering the result program.

The assembler unit 25 comprises a main master TS input 27 and a main delay queue 16 for buffering the main master TS, a result program input 28 coupled to the program queue 18 of the splicer unit 24 and a padding packet input 19 coupled to a padding packet generator 19 comprised in the splicer unit or even in the assembler unit itself. The result program input 28 is coupled to a leak buffer control 21 for eliminating the risk of overflow in buffers within the splicer unit. The assembler unit further comprises a stream assembler 20 devised to assemble an output transport stream 3 comprising the result program by utilizing the control data objects and selecting data packets from a main delay queue 16, the result

C2 program queue 18 and the padding packet generator and assembling the packets in accordance with control information generated in the process.

Please replace the paragraph beginning on page 12, line 26 of the specification with the following paragraph. Underlined text (except where appearing in the terms "idle_PID," "occupied_PID," "idle_PIDs," "temporal_ref,"and "vbv_delay," where the underscore was present in the originally-filed application) indicates added material while deleted material has been struck through. Support for this amendment is found in the application as originally filed and no new matter has been added by this amendment.

C3 An embodiment of the invention comprises steps and means for supporting increased computation efficiency with preserved data integrity and time decoupling between the target program and the rest of the master transport stream. This is accomplished by separating TS packets that need their integrity, from TS packets that are less sensitive with regard to change of content or position in the master transport stream. The separation is carried out by detecting the packet identifier (PID) of the integrity needing TS packets, here called occupied_PID, and the less integrity needing TS packets, here called idle_PID, and marking the meta data or the control data objects for reach of the data packets as occupied or idle, respectively. The positions of all TS packets belonging to the set of packets having idle_PIDs are considered free to utilize when ~~a~~ assembling the output stream, and the consequence is that the idle_PID packets are delayed in the output transport stream and thus bandwidth is relocated.~~.~~ The idle_PIDs typically comprises~~s~~ possibly occurring padding PIDs and the PIDs carrying the target program. It may also include PIDs for packets carrying

programs that are or will be entirely removed from the master transport stream~~.P~~_and for packets carrying private data which is not real-time critical, for example IP~~_~~traffic. The idle marks declare the positions as free to reuse for packets from the target program or, during an insertion cycle, from the spliced program, regardless of their original content or timing. For TS packets having idle_PIDs the decoder pushes ~~a~~ the idle marked, meta data structure onto the main delay queue. In the specific case that the idle packet is a null packet, another reference to it is stored in a separate meta data structure, which is pushed onto a specific queue for further meta data gathering and processing. At most one packet per switch between original program content and inserted program content and per elementary stream ES will have its content changed. That is, if it includes data from two access units (Cf. Appendix A) and only one of them should be used in the resulting stream. Such packets are split into two packets so that each packet, in its entirety, may be associated with the other packets of the respective access units. Another extra packet, for the purpose of carrying a packetized elementary stream header (PES-header), is also created at the switch point. Beyond this, the packets from the idle_PIDs are also left unchanged when it comes to the picture data. However, time stamps, temporal_reference, and vbv_delay fields are changed as appropriate.

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Please replace the paragraph beginning on page 17, line 22 of the specification with the following paragraph. Underlined text indicates added material while deleted material has been struck through. Support for this amendment is found in the application as originally filed and no new matter has been added by this amendment.

Leaving and entering data streams in a way that enables seamless splices requires suitable in-points and out-points in the master stream as well as in the slave streams. A suitable out-point is characterized in that the last pictures before the out-point constitutes a complete sub-group of pictures, i.e. each picture in the sub-group should be decodable independently of succeeding pictures. A suitable ~~out~~in-point is in its turn characterized by belonging to a group of pictures (GOP) that is decodable independently of any preceding pictures. Such a GOP is called a closed GOP. The present invention comprises a functionality that detects and/or creates such in-points and out-points, e.g. by achieving closed GOPs when needed. In accordance with the invention an out-point is selected by selecting a suitable out-group, which is the last group to send in the stream to be ~~leaved~~ left. The property of the out-subgroup is that bi-directionally coded pictures are decodable by means of the information of the pictures within the selected sub-group. The property of a suitable in-subgroup is that it must begin with an I-picture, since the tail of the last picture or picture from the old stream must be aligned with the start of a suitable I-picture from the new stream. Such an I-picture is usually available within half a GOP and an in-subgroup is created according to the invention by eliminating the closest preceding B-pictures that have an earlier presentation time than the I-picture selected for the in-point. In order to align the in-point, i.e. the start of a selected I-picture is delayed or advanced by means of buffers comprised in the invention. Selection of one of two candidate I-pictures at which the master stream is re-entered is carried out dependent on a current program delay the time distance from a desired switch time to a presentation time stamp (PTS) of each candidate I-picture such that the accumulated variable program delay is minimised.